

REMARKS

The Office rejects claims 21, 23, 24, 29, and 30 and objects to claims 22, 25-28, and 33 in the subject application. Claims 1-20, 31, and 32 are subject to restriction. Applicant amends claims 21, 22, 24, 25, 27, and 29, and cancels claim 23. Claims 21, 22, 24-30, and 33 (2 independent claims and 10 total claims) remain pending in the application.

Support for the various amendments may be found in the originally filed specification, claims, and figures. No new matter has been introduced by these amendments. Reconsideration of this application is respectfully requested.

35 U.S.C. §112 REJECTION

The Office rejects claim 29 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. The Office alleges that the phrase "desired bent shape" is unclear. Applicant respectfully traverses the rejection.

Based on the prior Response, Applicant believes the term "desired bent shape" is clear. However, in hopes of receiving a speedy prosecution of this application, Applicant has amended claim 29 to remove the term "desired". Thus, Applicant respectfully requests withdrawal of this rejection.

35 U.S.C. § 103 REJECTIONS

Zong and Kehry References

The Office rejects claim 21 under 35 U.S.C. §103(a) as allegedly being unpatentable over newly cited references Zong (European Patent Appl. No. 239914, published October 7, 1987) in view of Kehry (DE 3844572, published February 15, 1990, assignee is Daimler Benz AG and Becker Autoradio).

The Office provides an English translation of the Kehry reference. However, the Kehry reference fails to translate many German words, so that Applicant only relies on the English translated words. Applicant submits that 37 C.F.R. § 1.2 requires that all "business with the Patent and Trademark Office should be transacted in writing" and that "the action of the Patent and Trademark Office will be based exclusively on the written record in the Office". Accordingly, because some terms in the Kehry reference

are not in English and not part of the written record, this Response is based solely on the English translated words in the Kehry reference. If the Office wishes to rely on the non-English translated words in the Kehry reference or other non-English aspects, Applicant requests re-issuance of a non-final office action including an English translation of those portions of the Kehry reference as part of the written record. Applicant respectfully traverses the rejection.

Zong discloses an electronic loudspeaker system, which is mounted on a transport means.¹ The Zong system has a characteristic wave shape generator, an attenuator, an amplifier, a loudspeaker, and a controller. This system is designed on the basis of the principle of harmony and acoustics and suitable for various transport means for safe driving.² As conceded by the Office, Zong fails to disclose "a dipole sound source provided in a vicinity of a position of a passenger wherein at least one acoustic radiation axis thereof is directed outwardly from a vehicle interior" as recited in claim 21.

Kehry discloses a roof-mounted indicator device for emergency services of vehicles (providing a visual and audible warning for emergency services vehicles (i.e., police and fire services)). The roof-mounted device can operate in all weather conditions, because it has panes of glass covering the panels and loudspeaker horns (to be able to be heated).³ Figures 1 and 2 in Kehry illustrate this device including loudspeakers 11 and 13 behind plates 10 to prevent these loudspeakers from freezing up. The sound radiation to the rear is served by loudspeaker 13.

But Zong in view of Kehry fails to teach, advise, or suggest "a dipole sound source" as recited in claim 21. First, Kehry fails to disclose a dipole sound source, only loudspeakers 11 and 13. Loudspeaker 13 in Kehry is described as "sound radiation to the rear is served by loudspeaker 13". Neither loudspeaker 11 or 13 is described as a dipole sound source. Second, Kehry fails to disclose "the dipole sound source includes at least two loudspeakers wherein the at least two loudspeakers are arranged so that respective acoustic radiation planes thereof are directed opposite to each other" as recited in claim 21 (emphasis added).

¹ Zong, claim 1.

² Zong, Abstract.

³ Kehry, Title and Abstract.

Zong in view of Kehry also fails to teach, advise, or suggest "a dipole sound source provided in a vicinity of a position of a passenger wherein at least one acoustic radiation axis thereof is directed outwardly from a vehicle interior" as recited in claim 21 (emphasis added). First, the roof-mounted device in Kehry is located outside the interior of the vehicle (i.e., "roof-mounted"). Accordingly, loudspeakers 11 and 13 (the alleged dipole sound source) are not located in a vicinity of a position of a passenger, because the passenger would not ride on the roof of the car! Second, Kehry does not mention an acoustic radiation axis of the dipole sound source. An exemplary embodiment of a dipole sound source is described at page 25, line 11 to page 26, line 14 of the subject application, which indicates how it is possible to change the directional radiation pattern of a sound source 1. Kehry fails to mention an acoustic radiation pattern and consequently fails to disclose "at least one acoustic radiation axis thereof is directed outwardly from a vehicle interior" as recited in claim 21.

Regardless, since loudspeakers 11 and 13 are located on the roof of the vehicle, an acoustic radiation axis associated therewith cannot be directed outwardly from the vehicle interior. Based on these differences, Kehry teaches away from the claimed invention due to the exterior location of the Kehry device.

Finally, Zong in view of Kehry also fails to teach, advise, or suggest "the signal processing means variably controls a phase of an input to at least one of the loudspeakers included in the dipole sound source" as recited in claim 21, because Kehry further fails to disclose such a signal processing means.

Thus, Zong in view of Kehry fails to teach, advise, or suggest one or more of the missing claimed elements. Furthermore, "The factual inquiry whether to combine references must be thorough and searching".⁴ "It must be based on objective evidence of record".⁵ "This precedent has been reinforced in myriad decisions, and cannot be dispensed with".⁶ Accordingly, Applicant submits that the cited art of record contains no

⁴ In re Sang Su Lee, 277 F.2d 1338, 1342, 61 U.S.P.Q.2d (BNA) 1430 (Fed. Cir. 2002) (citing McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d (BNA) 1001, 1008 (Fed. Cir. 2001)).

⁵ In re Sang Su Lee at 1342.

⁶ Id. (citing Brown & Williamson Tobacco Corp. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d (BNA) 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'" quoting C.R. Bard, Inc. v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 U.S.P.Q.2d (BNA) 1225, 1232 (Fed. Cir. 1998); In re Dembiczak, 175 F.3d 994, 999, 50 U.S.P.Q.2d (BNA) 1614, 1617 (Fed. Cir. 1999)).

teaching, suggestion, or motivation to combine the references as proposed by the Office.⁷ Regardless, in light of the foregoing, the combinations fail to teach, advise, or suggest the missing claimed elements.

Zong, Kehry, and Hayakawa References

The Office also rejects claims 23, 24, and 29 under 35 U.S.C. §103(a) as allegedly being unpatentable over Zong in view of Kehry in further view of Hayakawa (JP-06-072253, published March 15, 1994, issued to Kenwood Corp.).

Based on the foregoing discussion of claim 21 and the Zong and Kehry references, claims 23, 24, and 29 (which depend from claim 21) are also patentable over Zong in view of Kehry in further view of Hayakawa. Applicant respectfully requests withdrawal of this rejection.

Zong, Kehry, Hayakawa, and Dodge References

Finally, the Office rejects claim 30 under 35 U.S.C. §103(a) as allegedly being unpatentable over Zong in view of Kehry in further view of Hayakawa in further view of Dodge (U.S. Patent No. 4,460,061, issued July 17, 1984 to Pennwalt Corporation).

Based on the foregoing discussion of claim 21 and the Zong and Kehry references, claim 30 (which depends from claim 21) is also patentable over Zong in view of Kehry in further view of Hayakawa in further view of Dodge. Applicant respectfully requests withdrawal of this rejection.

⁷ See ACS Hosp. Systems, Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577 (Fed. Cir. 1984) (teachings of the prior art can be combined to show obviousness only if there is some suggestion or teaching to do so).

CONCLUSION

Thus, the Applicant respectfully submits that the present application is in condition for allowance. Reconsideration of the application is thus requested. Applicant invites the Office to telephone the undersigned if he or she has any questions whatsoever regarding this Response or the present application in general.

Respectfully submitted,

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